

CLAIMS

We Claim:

1. A stationary exercise bicycle comprising:
 - a frame adapted for placement on a stationary horizontal surface;
 - a seat mounted on said frame;
 - a first pedal and a second pedal movable with respect to said frame in a generally circular direction;
 - a shaft having first and second ends rotatably secured to said frame;
 - a first and a second hub member secured to said first and second ends respectively of said shaft for rotation therewith;
 - a first crank arm having a first end secured to and for rotation with said first hub member and a second end rotatably connected to said first pedal;
 - a second crank arm having a first end secured to and for rotation with said second hub member and a second end rotatably connected to said second pedal; and
 - a drive member secured to said first hub member for rotation therewith.
2. The bicycle of Claim 1 wherein each of said first and second ends of said shaft are configured with a noncircular surface and said first and second hub members are configured with central apertures configured to engage said noncircular surfaces of said first and second ends of said shaft.
3. The bicycle of Claim 1 wherein said first and second hub members are configured with a central aperture and are secured to said first and second ends of said shaft by a fastener member insert through said central apertures.
4. The bicycle of Claim 1 wherein said first and second ends of said crank arms are configured with a mounting portion each said mounting portion having a plurality of fastener receiving apertures and wherein said first and said second hub members include a plurality of apertures aligned with said mounting apertures and wherein a plurality of fastener members are inserted through said mounting apertures and said hub member apertures to secure said crank arms to said hub members.
5. The bicycle of Claim 4 wherein said drive member is configured with a plurality of apertures aligned with said first hub member apertures and a first

set of said fasteners additionally serves to secure said drive member to said first hub member.

6. The bicycle of Claim 5 wherein said drive member is secured between said first hub member and said frame.

7. The bicycle of Claim 4 wherein said shaft is supported in said frame by a crank bushing and at least one bearing and secured in said frame by a plurality of retainer rings.

8. The bicycle of Claim 4 wherein said first and second ends of said shaft are configured with tapered noncircular surfaces and said first and second hub members are configured with central apertures configured to engage said noncircular surfaces of said first and second ends of said shaft and are secured to said first and second ends of said shaft by a fastener member inserted through each of said central apertures.

9. The bicycle of Claim 1 wherein said first hub is secured to said shaft by a fastening member having a threaded first end and a washer wherein said first end of said fastening member is threaded into said first end of said shaft and said washer is located between said first hub and a second end of said fastening member.

10. A stationary exercise bicycle comprising:

a frame adapted for placement on a stationary horizontal surface;

a seat mounted on said frame;

a pedal;

a shaft having a first end configured with a noncircular cross section rotatably secured to said frame;

a hub member having a central aperture engaged with said first end of said shaft for rotation with said shaft;

a drive member secured to said hub member for rotation therewith;

a fastening member extending through said hub and said drive member into said first end of said shaft effective to secure said hub member and said drive member to said shaft; and

a first crank arm having a mounting end secured to and for rotation with said hub member and a second end rotatably connected to said pedal.

11. A stationary exercise apparatus comprising:

a frame, including a substantially vertical support member, adapted for placement on a stationary horizontal surface;

a seat post located in said vertical support member such that said seat post can readily move up and down;

a seat secured to said seat post; and

a seat adjustment mechanism including a rack, having a plurality of teeth wherein at least a plurality of said teeth have a substantially horizontal surface, secured to said seat post; a latch mechanism secured to said vertical support member that includes a latch member having a first surface adapted for engagement with said horizontal surfaces; and a release mechanism including a release handle adapted to move said latch member from engagement with said horizontal surfaces of said teeth.

12. The apparatus of Claim 11 wherein said release mechanism includes a shaft rotatably secured to said support member and engaged with said latch member, a bracket attached to said release handle and said shaft wherein said release handle is effective to rotate said shaft thereby disengaging said first surface of said latch member from said teeth.

13. The apparatus of Claim 11 additionally including a biasing member secured to said support member and said latch member effective to urge said latch member into engagement with said teeth.

14. The apparatus of Claim 11 wherein said release mechanism includes a latch support bracket secured to said support member, a shaft rotatably supported by said latch support bracket and connected for rotation with said latch member, a release handle bracket attached to said release handle and said shaft whereby pulling up on said release handle is effective to rotate said latch member away from said rack thereby disengaging said first surface of said latch member from said horizontal surfaces of said teeth.

15. The apparatus of Claim 14 additionally including a spring secured between said shaft and said latch member effective to urge said latch member into engagement with said teeth.

16. The apparatus of Claim 15 wherein said shaft is configured with at least one noncircular surface, said latch member is configured with a generally cylindrical portion adapted to engage with said shaft and at least

one fastener extending through said cylindrical portion of said latch member effective to secure said latch member to said shaft for rotation therewith.

17. The apparatus of Claim 15 wherein said seat post is configured with a channel and said rack is secured within said channel.

18. The apparatus of Claim 11 wherein said seat post is configured with a channel and said rack is secured within said channel.

19. The apparatus of Claim 11 wherein said teeth are spaced approximately one half inch apart.

20. The apparatus of Claim 11 additionally including a guide assembly secured to said seat post wherein said guide assembly includes at least one bearing surface and one stabilizer arm.

21. A stationary exercise apparatus comprising:

a frame;

a seat post having a bottom end and a top end;

a seat secured to said top end of said seat post;

support means for supporting said post on said frame so as to permit said seat post to readily move up and down;

a rack secured to said seat post;

latch means for latching said seat post in a vertical position on said rack; and

release means for permitting a user to selectively release said latch means from said rack.

22. The apparatus of Claim 21 wherein said latch means includes a latch member rotatably connected to said frame.

23. The apparatus of Claim 21 wherein said release means includes a release handle operatively connected to said latch member effective to rotate said latch member.

24. The apparatus of Claim 23 wherein said latch means includes biasing means for urging said latch means to said rack.

25. The apparatus of Claim 21 wherein said rack includes a plurality of teeth spaced approximately one half inch apart.

26. The apparatus of Claim 21 additionally including a guide assembly secured to said bottom end of said seat post wherein said guide assembly includes at least one bearing surface and one stabilizer arm.

27. The apparatus of Claim 26 wherein said support means includes an aperture and said stabilizer arm includes a portion adapted to engage said aperture to limit said upward motion of said seat post.
28. The apparatus of Claim 26 wherein said guide assembly includes a bumper secured to a lower portion of said guide assembly.
29. A stationary exercise apparatus comprising:
 - a frame, including a substantially vertical support member, adapted for placement on a stationary horizontal surface;
 - a seat post having a top end and a bottom end located in said vertical support member such that said seat post can readily move up and down;
 - a seat secured to said seat post; and
 - a guide assembly secured to said bottom end of said seat post wherein said guide assembly includes at least one bearing surface and one stabilizer arm.
30. The apparatus of Claim 29 wherein said support means includes an aperture and said stabilizer arm includes a portion adapted to engage said aperture to limit said upward motion of said seat post.
31. The apparatus of Claim 29 wherein said guide assembly includes an bumper secured to a lower portion of said guide assembly.
32. The apparatus of Claim 29 wherein said guide assembly includes a second bearing surface and a second stabilizer arm.
33. The apparatus of Claim 32 wherein said support member includes an aperture and one of said stabilizer arms includes a portion adapted to engage said aperture to limit said upward motion of said seat post.
34. The apparatus of Claim 33 wherein said guide assembly includes a bumper formed of an elastomeric material secured to a lower portion of said guide assembly.
35. The apparatus of Claim 33 wherein said bearing surfaces, said stabilizer arms and a bottom portion of said guide assembly are formed of a unitary piece of plastic material.
36. A stationary exercise apparatus comprising:
 - a frame, including a substantially vertical support member, adapted for placement on a stationary horizontal surface;

a seat post located in said frame such that said seat post can readily move up and down;

a seat secured to said seat post; and

a seat adjustment mechanism including a rack secured to said seat post and a latch mechanism secured to said vertical support member that includes a latch member adapted to engage said rack and to support on said frame the weight of a user on said seat.

37. A stationary exercise apparatus comprising:

a frame, including a substantially vertical support member, adapted for placement on a stationary horizontal surface;

a seat post located in said frame such that said seat post can readily move up and down;

a seat secured to said seat post; and

a seat adjustment mechanism including a rack secured to said seat post and a latch mechanism secured to said vertical support member that includes a latch member adapted to engage said rack and a release mechanism including a release handle adapted to move said latch member from engagement with said rack and wherein said rack and said latch member are configured so as to permit a user to raise said seat without utilizing said release mechanism.